What is claimed is:

1. A method for displaying lines on a display device, said method comprising:
generating a plurality of sample positions in a two-dimensional space;
determining a sample normal distance for each of the sample positions with respect to a line in the two-dimensional space;
assigning sample values to said sample positions based on the sample normal distance of each of said sample positions;
operating on one or more of said sample values to determine a pixel value;
transmitting the pixel value to a display device.

2. The method of claim 1, wherein said sample values comprise color values.

3. The method of claim 1, wherein said sample values comprise transparency values.

4. The method of claim 1, wherein said operating on said one or more sample values comprises:
spatially filtering said one or more sample values.

5. The method of claim 1, wherein said determining said sample normal distance for each of the sample positions with respect said line comprises:
computing a vertical displacement between the sample position and the line; and
multiplying the vertical displacement by a slope correction factor.

6. The method of claim 1, wherein said determining said sample normal distance for each of the sample positions with respect to said line comprises:
computing a horizontal displacement between the sample position and the line; and
multiplying the horizontal displacement by a slope correction factor.

7. The method of claim 1, wherein said assigning sample values to said sample positions based on the sample normal distance of each sample position comprises:

determining a window value according to a window function for each of said sample positions based on the corresponding sample normal distance;

computing said sample value for each of said sample positions based on the corresponding window value.

8. The method of claim 7, wherein said determining said window value according to said window function for each of said sample positions comprises:

multiplying the sample normal distance of each sample position by an anti-aliasing correction factor (ACF) to determine a corresponding scaled distance value;

evaluating said window function at the first scaled distance value.

9. The method of claim 7, wherein said ACF is greater than one.

10. The method of claim 7, wherein said multiplying the sample normal distance of each sample position by said ACF reduces an apparent width of said line on the displace device.

11. The method of claim 7, further comprising receiving user input determining said ACF.

12. The method of claim 7, wherein the window function is a Gaussian function.

13. The method of claim 7, wherein the window function approaches zero as said sample normal distance increases.

14. The method of claim 7, wherein the window function attains a value of one for said sample normal distance equal to zero.

15. A graphics system for displaying lines on a display device, the graphics system comprising:

a sample buffer;

a rendering unit configured to (a) generate a plurality of sample positions in a two-dimensional space, (b) determine a sample normal distance for each of the sample positions with respect to a line in the two-dimensional space, (c) assign sample values to said sample positions based on the sample normal distance of each of said sample positions, and (d) store said sample values in said sample buffer;

a pixel calculation unit configured to read one or more of said sample values from the sample buffer, operate on said one or more sample values to determine a pixel value, and transmit the pixel value to a display device.

16. The graphics system of claim 15, wherein said sample values comprise color values.

17. The graphics system of claim 15, wherein said sample values comprise transparency values.

18. The graphics system of claim 15, wherein said pixel calculation unit is configured operate on said one or more sample values by spatially filtering said one or more sample values.

19. The graphics system of claim 15, wherein said rendering unit is configured to determine said sample normal distance for each of the sample positions with respect said line by:

computing a vertical displacement between the sample position and the line; and

multiplying the vertical displacement by a slope correction factor.

20. The graphics system of claim 15, wherein said rendering unit is configured to determine said sample normal distance for each of the sample positions with respect to said line by:

computing a horizontal displacement between the sample position and the line; and

multiplying the horizontal displacement by a slope correction factor.

21. The graphics system of claim 15, wherein said rendering unit is configured to assign sample values to said sample positions based on the sample normal distance of each sample position by:

determining a window value according to a window function for each of said sample positions based on the corresponding sample normal distance;

computing said sample value for each of said sample positions based on the corresponding window value.

22. The graphics system of claim 21, wherein said rendering unit is configured to determine said window value according to said window function for each of said sample positions by:

multiplying the sample normal distance of each sample position by an anti-aliasing correction factor (ACF) to determine a corresponding scaled distance value;

evaluating said window function at the first scaled distance value.

23. The graphics system of claim 21, wherein said ACF is greater than one.

24. The graphics system of claim 21, wherein said multiplying the sample normal distance of each sample position by said ACF reduces an apparent width of said line on the displace device.

25. The graphics system of claim 21, wherein said rendering unit is further configured to receive user input determining said ACF.

26. The graphics system of claim 21, wherein the window function is a Gaussian function.

27. The graphics system of claim 21, wherein the window function approaches zero as said sample normal distance increases.

28. The graphics system of claim 21, wherein the window function attains a value of one for said sample normal distance equal to zero.